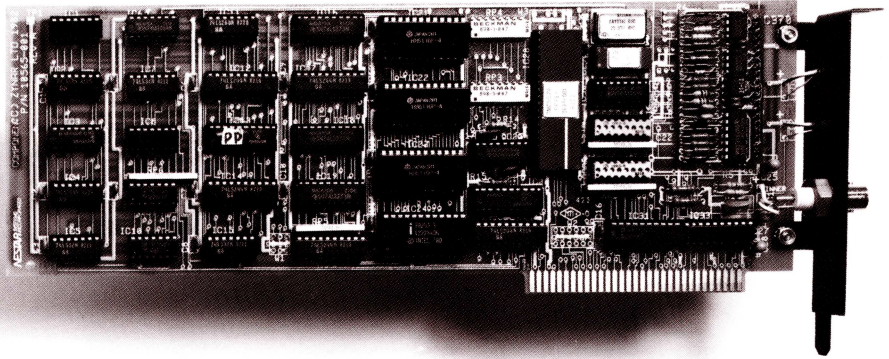


# IBM PERSONAL COMPUTER NETWORK INTERFACE CARD



A Nestar Network Interface Card connects the IBM® PC to the PLAN 4000™ system. The card plugs into any peripheral slot of the workstation. Coaxial cable, the transmission medium of the network, is then plugged into the back of the IBM PC. The card contains devices that control the transmission of data on the network. It also contains memory for buffering of data. Because the network protocols are handled independently by the interface, data transfer is both fast and cost efficient.

## Features

- ☐ Plugs into any IBM PC slot
- ☐ Compatible with IBM expansion bus
- ☐ 2.5 Megabits network transmission speed using low cost coaxial cable
- ☐ Network protocol guarantees equitable access by all stations
- ☐ Internet compatible network protocols
- ☐ Packet level flow control prevents unnecessary network traffic
- ☐ Broadcast message facility
- ☐ Transformer coupled for ground isolation
- ☐ Does not affect network operation when powered off
- ☐ With multiple network interface cards, station can run on multiple networks
- ☐ 2 LED's indicate when board is operating and assists in service diagnostics
- ☐ Contains 2 Kbyte of RAM for buffers, 2 Kbytes of RAM for programming and 4 Kbytes of PROM
- ☐ Interrupt capability on packet transmission or reception
- ☐ Unique Ethernet™ address assigned to each card
- ☐ Data is moved from IBM PC to network buffer at 381K bytes/sec
- ☐ Asynchronous network data transfer allows overlapped processing and network access

# NESTAR

PLAN 4000™

## SPECIFICATIONS SUMMARY

### PERFORMANCE SPECIFICATIONS

**Maximum number of stations:** 255  
per network segment

**Transmission Rate:** 2.5 Megabits  
per second transfer rate

**Addressing:** 8 bit station local  
address; 48 bit Ethernet internet  
address

**Access Protocol:** Contention free  
token passing bus (Baseband  
modulation)

**Network Changes:** Stations may  
be connected to or removed from  
an operating network at any time

**Message Protocol:** Multiple pack-  
ets per message using transport  
level Sequenced Packet Protocol  
(ISO levels 1 to 4)

**Packet Size:** 2-512 bytes

**Packet Protocol:** Acknowledged  
error-free packets with flow control

**Error Checking:** 16 bit Cyclic Re-  
dundancy Check (CRC) on data  
and addresses

**Error Recovery:** Automatic  
retransmission on packet or mes-  
sage basis

**Transmission Mode:** Baseband se-  
rial transmission using transformer  
coupled RG-62 coaxial cable with  
BNC connectors. Cable is available  
in indoor or outdoor vinyl,  
polyethylene or teflon\*

**Cable Topology:** Arbitrary (without  
loops) using Line Isolation Devices  
(LID™)

**Cable Length:** Maximum of 2,000  
feet to nearest LID; 22,000 feet  
maximum between any two stations  
without gateways

### POWER

☐ +5.V DC, -5.V DC from IBM  
bus

☐ Typical power dissipation 700  
milliamps at 5 volts, 8 milliamps at  
-5 volts

☐ Maximum power dissipation  
1350 milliamps at 5 volts, 15 mil-  
liamps at -5 volts

### MECHANICAL

☐ Size: 11.35"L X 4.9"W X .5"D

☐ Weight: 9.25 oz.

☐ Double-sided solder mask  
printed circuit board

☐ Standard 62-pin IBM bus con-  
nection with gold-plated fingers

☐ Network connection consists of  
one female BNC coax connector  
(RG-62)

### ENVIRONMENTAL

☐ Operating Temperature: 50°F to  
104°F (10°C to 40°C)

☐ Storage Temperature: -40°F to  
140°F (-40°C to 60°C)

**NESTAR**

**Headquarters:**  
**NESTAR SYSTEMS, INC.**  
2585 East Bayshore Road  
Palo Alto, California 94303  
Tel. (415) 493-2223  
**TELEX: 171420 — NESTAR PLA**

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*Due to our continuing program of product development, specifications are subject to change without notice.*